

5,458,852

issued as Patent No. 6,143,576, which is a continuation in part of U.S. Patent Application No. 08/447,981, which issued as U.S. Patent No. 5,885,527 on March 23, 1999, which is a divisional application of U.S. Patent Application No. 08/065,528 (abandoned), filed 19 May 1993, which was a continuation-in-part of U.S. Patent Application No. 07/887,526 filed 21 May 1992 which issued as Patent 5,458,852 on October 17, 1995; and U.S. Patent Application No. 08/902,775 which issued U.S. Patent No. 6,271,040, which is a continuation in part of U.S. Patent Application No. 08/810,569 which issued as Patent No. 6,143,576, from each of which priority is claimed, and each of which is fully incorporated by reference herein.

IN THE CLAIMS

Please cancel claims 1-73 provided in the original specification and enter the following new claims: These new claims are reflected in the specification filed herewith.

Rule 126 74. A method for regulating fluid flow in a device that conducts fluid through one or more capillary channels, comprising:

introducing fluid into a capillary channel comprising (i) a first capillary region comprising a hydrophilic surface and (ii) a second capillary region comprising a hydrophobic surface adjacent to said first capillary region, whereby fluid flows through said first capillary region to contact said hydrophobic surface.

75. The method of claim 74, wherein said device further comprises a third capillary region comprising a hydrophilic surface adjacent to said second capillary region, wherein said hydrophobic surface controls the rate of flow of said fluid into said third capillary region.

76. The method of claim 75, wherein said hydrophobic surface delays fluid flow into said third capillary region until rendered hydrophilic.

77. The method of claim 74, wherein said device comprises a plurality of capillary channels, one or more of which comprise a region comprising a hydrophobic surface.

78. The method of claim 76, wherein said device further comprises a vent.